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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,433	10/23/2003	Chiu Jui Ta	DEE-PT135	8411

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EXAMINER	
NGUYEN, HIEP	

ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/692,433	TA ET AL.	
	Examiner	Art Unit	
	Hiep Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

All components (transistors) in figure 4 must be labeled.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: in page 7, "a first differential comparator 31" and "a second differential comparator 32" are not found in figure 4. Circuit (312) is disclosed as the "first operational amplifier", but in figure 4, circuit (312) comprising two diodes connected transistors that are only the loads of the amplifier comprising element (31). Thus the ""first operational amplifier (312) cannot amplify any signal. In the third paragraph, the disclosure"When the first differential receiving circuit 311 is under a receiving status, **a stop signal** is produced to **shut down** the second differential comparator circuit 32 to avoid the power loss. When the first differential receiving circuit 311 is shut down due to the voltage of input signal is within the 0 to 2 Volt voltage range and is detected, **a trigger signa**l is produced to drive the second differential comparator 32 for receiving the input signals" is not clear. Figure 4 shows no signal that can shut down the second differential comparator circuit 32 when the first differential receiving circuit 311 is

shut down and no **trigger signal** for driving the second differential comparator circuit 32. The Applicant is requested to show the "stop signal", the "trigger signal" in figure 4 and to explain how the **voltage ranges** are detected. It is seen that the detector (30) is not connected to the input signal (IN-, IN+) thus; it cannot detect the range of the input signal.

In page 8, first paragraph, it is not clear what is the "trigger signal" in figure 4 and how does it drive the "second differential comparator 32". In the last paragraph of page 8, it is not seen how the "second differential comparator 32" can be shut down, what is the "stop signal" and how the "stop signal" can be generated. Figure 4 shows a circuit with two differential comparators. Any signal level inputted to the inputs of these comparators will be amplified. No "range selection", no "stop signal" and "no trigger signal" are seen in the circuit of figure 4. In the first paragraph the Applicant discloses that circuit (30) is a detection circuit. Circuit (30) comprises a transistor-connected diode coupled to the supply voltage and a transistor used as a resistance, thus, circuit (30) performs as a current source, not a "detection circuit". The Applicant is requested to explain how circuit (30) can detect the status of the first differential receiving circuit (311).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 ~~are~~ is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Correction and/or clarification is required.

Regarding claim 1, the recitation "a detecting circuit...said first range portion" on lines 9-12 is non-enable. The "detecting circuit" (30) in figure 4 cannot be seen to be able to

detect the status of the "first differential comparator (312, 311) and no "trigger signal" is seen to be produced by this "detecting circuit". Circuit (30) comprises a transistor connected diode coupled to the supply voltage and to a transistor used as a resistance. When the power supply is turned on, a current will flow through circuit (30) to the ground. Circuit (30) cannot detect the status (shut down) of the "first differential comparator (312, 311). The Applicant is request to show what is the "trigger signal" and to explain how this "trigger signal" is produced.

The recitation " a second differential comparator ...to said trigger signal" on lines 13-16 is non-enable. The second differential receiving circuit (321) of the second differential comparator is connected to the transistor-connected diode of the "detecting circuit (30). Thus a **positive** voltage (Vcc-diode drop) is always coupled to the gate of the P-channel of circuit (3211) to turn this transistor off. Thus the "second differential comparator" cannot function as disclosed. The Applicant is requested to show what are the "a trigger signal" generated by the "detecting circuit" (30) and how this "a trigger signal" can activate the second differential comparator.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and/or clarification is required.

Regarding claim 1, the recitation "a detecting circuit electrically connected to said first differential comparator for producing a trigger signal when said detecting circuit detects that said first differential comparator is shut down due to the fact that said input voltage is lower than a lower-limit of said first range portion" on lines 9-12 is indefinite because it is not clear how the "detecting circuit" (30) can detect when the first differential comparator is shut down. The "detecting circuit" (30) comprises a diode connected transistor and a transistor used as a resistor. With the connection shown in figure 4, the "detecting circuit" (30) cannot detect the status of first differential comparator. It is also not clear how the "trigger signal" is produced and where it is in figure 4. The recitation "a second differential comparator electrically

connected to said detecting circuit for receiving and amplifying said input voltage within said second range portion, and outputting said output voltage in response to said trigger signal" on lines 6-13 is indefinite because it is misdescriptive. Figure 4 shows that the second differential receiving circuit (321) of the second differential comparator is connected to the transistor-connected diode of the "detecting circuit (30). Thus a **positive voltage** (Vcc-diode drop) is always coupled to the gate of the P-channel of circuit (3211) thus, the second differential receiving circuit (321) is always turned off.

Regarding claim 3, the recitation "a first operational amplifier circuit electrically connected to said first differential receiving circuit for amplifying said input voltage" is indefinite because it is misdescriptive. The "first operational amplifier circuit" (312) comprises diodes used as loads. Thus, the "first operational amplifier circuit" (312) cannot amplify any signal.

Regarding claim 4, the recitation "a second differential receiving circuit electrically connected to said detecting circuit for receiving said input voltage ranged in said second range portion in response to said trigger signal" on lines 3-5 is indefinite because it is misdescriptive. The second differential receiving circuit (321) is connected to the cathode of the diode of the "detecting circuit" (30). The anode of this diode is connected to the power supply voltage thus, a constant voltage is connected to the second differential receiving circuit (321) and this constant voltage is not considered to be the "trigger signal".

Claims 6 and 7 are indefinite because it is not clear how the second differential comparator **can be** shut down to avoid a floating when said first differential comparator is operated. Figure 4 shows that inputs of the first and second differential comparators are connected to the same input signal. Thus, they will operate at the same time and there is no indication showing that one of them is turned on and the other is turned off. Explanation is required.

Regarding claim 8, the recitation "a first operational amplifier" on line 9 is indefinite because as mentioned above, circuit (312) is not an amplifier. The recitation "is shut down" on line 14 is indefinite because it is not clear how the "first differential receiving circuit" can be shut down. The recitation "said trigger signal" on line18 is indefinite because it is not clear how the "said trigger signal" is generated and how the "said trigger signal" can affect the

"second differential receiving circuit" (321). The Applicant is requested to show the "trigger signal" in the drawing and to explain how it is generated. The recitation " a second operational amplifier" is indefinite because it is misdescriptive. Circuit (312) is a load circuit. It is not an amplifier as recited.

Claims 10 and 11 is indefinite because it is not clear how the first and second differential receiving circuits can be shut down.

Regarding claim 12, the recitations "a trigger signal", "shut down" are indefinite for the same reasons raised above.

Conclusion

In view of the significant 112, first and second paragraph indefiniteness issues noted above, no prior art could be applied by the examiner at this time since the scope and meaning of the claims cannot be determined. This is not an indication of allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen
07-26-04

TUAN T. LAM
PRIMARY EXAMINER